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Connecticut's Food Waste Problem: Innovation, Anaerobic Digestion, and the Dormant Commerce Clause

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Note

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Connecticut has a food waste problem. Much of its food waste ends up in landfills where it rots and produces methane gas that contributes to global warming. This Note examines Connecticut's efforts to address its food waste problem through a waste flow control law, Public Act 13-285. With this law, Connecticut became the first state to pass legislation to reduce food waste through state-mandated diversion. This Note frames its discussion of Public Act 13-285 in terms of federal initiatives to cut food waste and the growing national consensus on the important role for anaerobic digestion in reducing food waste. This Note argues that in the absence of a national food waste recycling ban, Public Act 13-285 provides an innovative solution that both reduces food waste and promotes Connecticut's anaerobic digestion industry. Connecticut's law, however, may be vulnerable to challenge under the Dormant Commerce Clause, which protects the belief that one state in its dealings with another may not place itself in a position of economic isolation. This Note further argues that the Dormant Commerce Clause should show deference to state experimentation on the issue of food waste reduction given the role states play as innovators and guardians of the environment.

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KARA A. ZARCHIN *

INTRODUCTION

In the United States, 30 to 40 percent of the post-harvest food supply is wasted every year.[1] This is $218 billion worth of food that is pitched in the garbage.[2] If this food waste[3] were grown in one place, "this mega-farm would cover roughly 80 million acres, over three-quarters of the state of California."[4] Globally, "[o]ne-third of the food produced for human consumption is lost or wasted . . . which amounts to about 1.3 billion tons

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* University of Connecticut School of Law, J.D., 2018; Bread Loaf School of English, M.A., 2013; Middlebury College, B.A., in English and History 2006. I would like to thank my family, especially my husband, Rob Madden, and children, Conor and Laurel Madden, for their continual support and love and my parents for their encouragement and guidance, always. Special thanks to Michael Rondon for his friendship and editing advice; Professor Mathilde Cohen for reading an earlier draft of this Note; Professor Loftus Becker for his insight on the writing process; and my colleagues on the *Connecticut Law Review* for their thoughtful feedback and excellent company.

[1] Jon Frandsen, *Here's How States Are Working to Curb Food Waste*, PBS (May 16, 2017, 1:49 PM), https://www.pbs.org/newshour/nation/heres-states-working-curb-food-waste [https://perma.cc/7JE6-AXMQ]; *see also* Adam Chandler, *Why Americans Lead the World in Food Waste*, THE ATLANTIC (July 15, 2016), http://www.theatlantic.com/business/archive/2016/07/american-food-waste/491513/ [https://perma.cc/H2PM-4XJU] ("[R]oughly 50 percent of all produce in the United States is thrown away—some 60 million tons (or $160 billion) worth of produce annually, an amount constituting 'one third of all foodstuffs.'").

[2] *Fighting Food Waste with Food Rescue*, FEEDING AM., http://www.feedingamerica.org/our-work/our-approach/reduce-food-waste.html [https://perma.cc/JQU8-7QX8] (last visited Jan. 9, 2018); *see* Chandler, *supra* note 1 ("For an American family of four, the average value of discarded produce is nearly $1,600 annually.").

[3] The Food and Agriculture Organization of the United Nations defines food waste as food wasted in any part of the food supply chain of "edible products going to human consumption." FOOD & AGRIC. ORG. OF THE U.N., GLOBAL FOOD LOSSES AND FOOD WASTE 2 (2011), http://www.fao.org/docrep/014/mb060e/mb060e.pdf [https://perma.cc/YYV7-9CB5]. *But see* Roni A. Neff et al., *Wasted Food: U.S. Consumers' Reported Awareness, Attitudes, and Behaviors*, PLOS ONE 10(6): e0127881 2 (2015), http://doi.org/10.1371/journal.pone.0127881 [https://perma.cc/6TZ8-WUMU] (arguing, instead, for the use of the expression "wasted food" because "it emphasiz[es] that the item is essentially food rather than essentially waste").

[4] *See* REFED, A ROADMAP TO REDUCE U.S. FOOD WASTE BY 20 PERCENT 10 (2016), http://www.refed.com/downloads/ReFED_Report_2016.pdf [https://perma.cc/HT5D-UXJV] ("Growing the food on this wasteful farm would consume all the water used in California, Texas, and Ohio combined.").

per year."[5] At every stage of the supply chain, food waste squanders resources, including water, land, energy, and labor.[6]

Food waste is the single largest component of American landfills.[7] This rotting food creates so much methane gas that landfills are the third-largest source of methane in the United States.[8] Methane is twenty-five times more harmful to the atmosphere than carbon dioxide.[9] In response to the severe impact of food waste on climate change, the United Nations announced that "[t]he vast amount of food going to landfills makes a *significant contribution* to global warming."[10]

Connecticut has more food waste in its Municipal Solid Waste (MSW)[11] stream than the national average.[12] In 2010, Connecticut's Department of Energy and Environmental Protection (DEEP) published an inaugural statewide waste characterization study that captured random samples of waste from residential and industrial/commercial/institutional

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[5] *See Food Loss and Food Waste*, FOOD & AGRIC. ORG. OF THE U.N., http://www.fao.org/food-loss-and-food-waste/en/ [https://perma.cc/V62M-CDMJ] (last visited Jan. 9, 2018) ("Food that gets spilled or spoilt before it reaches its final product or retail stage is called food loss.").

[6] *SAVE FOOD: Global Initiative on Food Loss and Waste Reduction*, FOOD & AGRIC. ORG. OF THE U.N., http://www.fao.org/save-food/resources/keyfindings/en/ [https://perma.cc/7DCL-L5FH] (last visited Dec. 17, 2017); *see also* Neff et al., *supra* note 3, at 2 ("Wasted food in North America/Oceania also accounts for an estimated 35% of freshwater consumption, 31% of cropland, and 30% of fertilizer usage; as well as 2% of U.S. greenhouse gas emissions; and 21% of post-recycling municipal solid waste." (internal citations omitted)).

[7] Chandler, *supra* note 1.

[8] *See Landfill Methane Outreach Program (LMOP)*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/lmop/basic-information-about-landfill-gas [https://perma.cc/8CMY-NEQA] (last visited Dec. 18, 2017) ("Municipal solid waste (MSW) landfills are the third-largest source of human-related methane emissions in the United States, accounting for approximately 15.4 percent of these emissions in 2015.").

[9] *Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/ghgemissions/overview-greenhouse-gases#CH4%20referenc [https://perma.cc/UNT3-YETR] (last visited Apr. 22, 2018) (comparing, pound for pound, the comparative impact of methane to carbon dioxide over a 100-year period).

[10] *Id.* (emphasis added). Notably, the close link between climate change and resource utilization "puts food waste squarely at the center of many global challenges" in addition to climate change. Food waste reduction also "would have a game-changing impact on natural resources depletion and degradation, food insecurity, [and] national security . . . ." REFED, *supra* note 4, at 1.

[11] Municipal Solid Waste "means solid waste from residential, commercial and industrial sources, excluding solid waste consisting of significant quantities of hazardous waste . . . land-clearing debris, demolition debris, biomedical waste, sewage sludge and scrap metal . . . ." CONN. GEN. STAT. § 22a-207(24) (2017).

[12] Food waste comprises nearly 15 percent of the national MSW stream compared to over 22 percent of Connecticut's MSW stream. CONN. DEP'T OF ENERGY & ENVTL. PROT., 2015 STATEWIDE WASTE CHARACTERIZATION STUDY (2016) Figure ES 2-6, http://www.ct.gov/deep/lib/deep/waste_management_and_disposal/Solid_Waste_Management_Plan/CMMS_Final_2015_MSW_Characterization_Study.pdf [https://perma.cc/6LPA-CYZA]; *Waste-to-Energy (Municipal Solid Waste)*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/index.cfm/data/index.cfm?page=biomass_waste_to_energy [https://perma.cc/XEH7-DTT3] (last visited Dec. 15, 2017).

generators across the state.[13] In 2015, DEEP replicated this study, providing for the first time comparative data of the presence of designated recyclables in the state's disposed MSW.[14] Over this five-year period, the incidence of food waste in the state nearly doubled from 13.5 to 22.3 percent—both in tonnage and as a percentage of the MSW stream.[15] No other recoverable material in the MSW stream increased so precipitously.[16] Simply put, Connecticut has a food waste problem.[17]

There are solutions to food waste. Multiple stakeholders could help reduce food waste by changing their behaviors. Indeed, much of the nation's food waste is cultural.[18] American consumers' obsession with the aesthetic quality of their food results in the waste of so-called "ugly" fruit and vegetables that are rejected because they are bruised or brown.[19] Meanwhile, large quantities of fresh produce in the United States are often left to rot in fields until, like the "ugly" fruits and vegetables, they too find their way into a landfill.[20] This Note examines Connecticut's innovative use of an organic waste ban to change the behavior of the state's commercial food wholesalers and distributers, industrial food manufacturers and processors, supermarkets, and resorts and conference centers.

Part I frames the central concern of this Note—food waste reduction in Connecticut—in terms of federal initiatives to cut food waste. The nation's

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[13] 2015 STATEWIDE WASTE CHARACTERIZATION STUDY, *supra* note 12, at ES-1.

[14] *Id.*

[15] In 2010, there were 321,481 tons of food waste in Connecticut's MSW stream compared to 519,832 tons in 2015. *Id.* at 3-1 to -6; CONN. DEP'T OF ENERGY & ENVTL. PROT., CONNECTICUT STATE-WIDE SOLID WASTE COMPOSITION & CHARACTERIZATION STUDY, FINAL REPORT ES-3 (2010), http://www.ct.gov/deep/lib/deep/waste_management_and_disposal/solid_waste/wastecharstudy/ctcompositioncharstudymay2010.pdf [https://perma.cc/TLB8-GZN2].

[16] 2015 STATEWIDE WASTE CHARACTERIZATION STUDY, *supra* note 12, at ES-5.

[17] There is no clear reason why Connecticut's food waste has increased in tonnage. Even Connecticut's 2015 Statewide Waste Characterization Study, *supra* note 12, which identifies this tonnage increase, fails to account for the cause(s) thereof. One contributing factor may be that consumers do not internalize the environmental costs of food waste. In 2014, researchers at Johns Hopkins conducted the first ever national survey targeted at understanding consumers' perceptions about food waste. Americans report feeling more bothered by letting a faucet drip or leaving the lights on than by discarding food. When respondents were asked what would motivate them to reduce food discards, "the most important motivation was saving money." For 22 percent of respondents, "environmental concerns of greenhouse gas emissions, energy and water were 'not at all important' motivations." Neff et al., *supra* note 3, at 1, 7; *see, e.g.*, Brian Dowling, *House Calls for Food Scraps? Meet New Haven's Biking Compost Man*, HARTFORD COURANT (Oct. 29, 2014, 10:54 AM), http://www.courant.com/consumer/hc-ls-compost-bike-new-haven-20141029-story.html [https://perma.cc/PTQ2-YYPM] (reporting how Domingo Medina, the founder of the New Haven-based compost pickup program, Peels & Wheels, believes that Connecticut's residents do not internalize the externalities associated with food waste because, while residents pay taxes for municipal trash removal, they "don't really pay the true costs of food production and food waste").

[18] Chandler, *supra* note 1.

[19] *Id.*

[20] *Id.*

food waste problem is readily solvable by Congress if it were so inclined. Although the United States has pledged to reduce per capita food waste by half by 2030,[21] Congress has not provided the necessary funding for the infrastructure to process the nation's food waste. In particular, this Note focuses on the growing consensus among key stakeholders that food waste reduction requires investment in anaerobic digestion, which converts food waste into energy through a process that works much the same way as a cow's stomach.[22]

Part II discusses how, in the absence of a national food waste recycling ban, Connecticut is one of five states that has passed either a waste ban or recycling law for food waste.[23] Specifically, Connecticut Public Act 13-285[24] is a flow control[25] law that mandates the recycling of organic materials—which includes food waste—if the business is within twenty miles of the nearest authorized recycling facility and produces more than 104 tons of organic materials annually.[26] The law's purpose is twofold: it both mandates food waste recycling *and* supports the state's nascent anaerobic-digestion industry.

This Note argues in Part III that Connecticut's organic waste ban may be vulnerable to challenge under the Dormant Commerce Clause, which protects the principle that "one state in its dealings with another may not place itself in a position of economic isolation."[27] But in the face of Congress' inaction, this Part argues that there should be deference to state experimentation on the issue of food waste reduction given the important role states play as innovators and guardians of the environment.

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[21] *United States 2030 Food Loss & Waste Reduction Goal*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal [https://perma.cc/VNQ6-KYVF] (last visited Dec. 17, 2017).

[22] Mitch Wertlieb & Melody Bodette, *Like a Cow's Stomach Magnified, Methane Digesters Make Energy, Reduce Waste*, VPR (Jan. 28, 2015), http://digital.vpr.net/post/cows-stomach-magnified-methane-digesters-make-energy-reduce-waste#stream/0 [https://perma.cc/284Z-ESAQ].

[23] Frandsen, *supra* note 1.

[24] Public Act 13-285, 2013 Conn. Acts 254 (Reg. Sess.).

[25] *See* United Haulers Ass'n, v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 334 (2007) ("'Flow control' ordinances require trash haulers to deliver solid waste to a particular processing facility.").

[26] This minimum tonnage requirement reduces to 52 tons as of January 1, 2020. The law excepts those generators "that perform[] composting of source-separated organic materials on site or treat[] source-separated organ materials via on-site organic treatment equipment." CONN. GEN. STAT. § 22a-226e(a)–(b).

[27] Baldwin v. G.A.F. Seelig, Inc., 294 U.S. 511, 527 (1935).

I. FEDERAL INITIATIVES TO PREVENT AND REDUCE FOOD WASTE

In recent years, there has been a trend to initiate food waste reduction goals as a means to end hunger and to address climate change.[28] In September 2015, the United States Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) announced "the first ever domestic goal to reduce food loss and waste by half by the year 2030."[29] Mere days after the announcement, the United Nations adopted a similar goal to reduce per capita food waste by half by the year 2030.[30]

Though an important step, the United States' food waste reduction goal is voluntary. It is an invitation "challenging the country to reduce food waste."[31] This Part argues, however, that a mere invitation for action is insufficient where federal financial support, such as tax incentives and loan funding, is needed for the development of the infrastructure to process food waste. This Part argues further that the federal government needs to support the development of anaerobic digestion, a food waste diversion process that the nation needs to reach its 50 percent diversion goal.

A. *Food Recovery Hierarchy Prioritizes Source Reduction Methods*

The EPA communicates its prevention and reduction priorities through its Food Recovery Hierarchy, which essentially promotes a "reduce, reuse, and recycle" action plan for food waste.[32] The Food Recovery Hierarchy serves as a tool guiding public[33] and private actions in this field.[34]

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[28] *See, e.g.*, Chris Crowley, *The United Nations Wants to Cut Food Waste in Half by 2030*, GRUBSTREET (Sept. 25, 2015, 4:00 PM), http://www.grubstreet.com/2015/09/un-food-waste-goals.html [https://perma.cc/A6XP-PBYP] (summarizing a recent resolution passed by the UN General Assembly establishing a goal of "cutting per-capita retail and consumer food waste in half by 2030"); *About Refresh*, REFRESH, http://eu-refresh.org/about-refresh [https://perma.cc/C4HX-XCNZ] (last visited Jan. 8, 2018) (describing the July 2015 launch of "REFRESH" ("Resource Efficient Food and dRink for the Entire Supply cHain"), a research project to combat food waste funded by the European Union and supported by twenty-six corporate partners from twelve European countries and China).

[29] *See United States 2030 Food Loss and Waste Reduction Goal*, *supra* note 21 ("By taking action on the U.S. 2030 Food Loss and Waste Reduction goal . . . the United States can help feed the hungry, save money for families and businesses and protect the environment.").

[30] Crowley, *supra* note 28.

[31] Allison Aubrey, *It's Time to Get Serious About Reducing Food Waste, Feds Say*, NPR (Sept. 16, 2015, 2:16 PM), https://www.npr.org/sections/thesalt/2015/09/16/440825159/its-time-to-get-serious-about-reducing-food-waste-feds-say [https://perma.cc/R4U3-ZM7M] (quoting then-Secretary of Agriculture Tom Vilsack).

[32] The Food Recovery Hierarchy resembles a reversed six-tiered pyramid with the most preferred option at the top and the least preferred (landfill/incineration) at the pyramid's pointy bottom. *Sustainable Management of Food: Food Recovery Hierarchy*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/food-recovery-hierarchy [https://perma.cc/3687-V4CV] (last visited Jan. 4, 2018).

[33] *See, e.g.*, H.R. 3444, 115th Cong. § 503 (requiring that recipients of a loan or grant under § 503 provide "a written commitment that the recipient has read and agrees to comply with the Food Recovery Hierarchy of the Environmental Protection Agency").

Specifically, this seven-tiered hierarchy "prioritizes actions [that are] most benefi[cial] for the environment, society and the economy."[35] First and foremost, the EPA encourages businesses and individuals to prevent waste in the first place.[36] The next best outcome, according to the EPA, is to ensure that surplus food is used to feed the hungry.[37] The goal here is to divert the 30 to 40 percent of all postharvest food supply that is wasted[38] to feed the over 12 percent of American households, or roughly 41 million people, who are food insecure.[39] Congress has long supported the donation of food that would otherwise go to waste.[40]

For the food waste that cannot be eliminated altogether, donated to food banks, or used to feed animals,[41] the Food Recovery Hierarchy's

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[34] *See, e.g.*, *infra* Part I.A (discussing how the nonprofit ReFED used the EPA's Food Recovery Hierarchy as a starting point in its data analysis of twenty-seven solutions for the nation's food waste).

[35] *Sustainable Management of Food: Food Recovery Hierarchy*, *supra* note 32.

[36] The EPA advises that businesses and individuals can achieve source reduction through simple managerial decisions like "making grocery lists, inventorying supplies, and buying less." Additionally, waste audits that determine "the amount, type, and reason for the generation of wasted food[] . . . will help to create effective wasted food prevention strategies." *Sustainable Management of Food: How to Prevent Wasted Food Through Source Reduction*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/how-prevent-wasted-food-through-source-reduction [https://perma.cc/HM8Q-M5L4] (last visited Jan. 4, 2018).

[37] *Sustainable Management of Food: Food Recovery Hierarchy*, *supra* note 32.

[38] Frandsen, *supra* note 1.

[39] These numbers are based on data from 2016. *Sustainable Management of Food: Reduce Wasted Food by Feeding Hungry People*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/reduce-wasted-food-feeding-hungry-people [https://perma.cc/MF5X-7LHJ] (last visited Jan. 4, 2018); *see* Matthew P. Rabbitt et al., *Understanding the Prevalence, Severity, and Distribution of Food Insecurity in the United States*, U.S. DEP'T OF AGRIC., ECON. RESEARCH SERV. (Sept. 6, 2017), https://www.ers.usda.gov/amber-waves/2017/september/understanding-the-prevalence-severity-and-distribution-of-food-insecurity-in-the-united-states/ [https://perma.cc/FB4P-YVCN] (defining a person as food insecure if "they had difficulty at some time during the year providing enough food for all their members because of lack of resources").

[40] *See, e.g.*, Bill Emerson Good Samaritan Food Donation Act, 42 U.S.C. § 1791(c) (2012) (protecting donors from civil and criminal liability with a floor of gross negligence); The Harvard Food Law and Policy Clinic, *America Can Finally Give More: Congress Passes Permanent Extension of Enhanced Tax Deductions for Food Donations*, CTR. FOR HEALTH L. & POL'Y INNOVATION: BLOG (Dec. 22, 2015), https://www.chlpi.org/america-can-finally-give-more-congress-passes-permanent-extension-of-enhanced-tax-deductions-for-food-donations/ [https://perma.cc/D5UX-UWPV] (describing how, in its 2016 omnibus budget, Congress included a permanent enhanced tax reduction for food donations available to all businesses).

[41] Notably, both state and federal policies frustrate the third tier of the Food Recovery Hierarchy, which promotes the donation of food waste to feed animals. While federal policy generally permits the feeding of food scraps to animals, there are rules, such as mandated heating requirements for food scraps comprised of animal derived byproducts, that hinder waste recycling to animals. *U.S. Food Waste Policy Finder: Connecticut Food Waste Policy*, REFED, http://www.refed.com/tools/food-waste-policy-finder/connecticut [https://perma.cc/JQQ7-Q4TS] (last visited Jan. 8, 2018). Many states either prohibit the feeding of food waste to animals or impose regulations that are far more stringent than the floor established by federal law. Kansas and Illinois, for example, prohibit feeding food waste to all animals. *Id.* Sixteen states prohibit feeding animal food waste to swine, and thirteen states regulate the feeding of food scraps to other animals beside swine. *Id.* Connecticut regulates the feeding

fourth tier recommends transforming these food scraps into energy through anaerobic digestion.[42] "Anaerobic digestion is the natural process in which microorganisms break down organic materials" in a closed space without oxygen.[43] This process produces biogas that consists of "mostly methane and carbon dioxide."[44] When the carbon dioxide is removed, methane—"the primary component of natural gas"—remains.[45] Unlike the methane gas emitted at landfills, this gas can be sold on the natural gas grid.[46]

Anaerobic digestion's ability to convert biomass into energy makes it the "next big renewable energy source."[47] In this way, anaerobic digestion is self-sustaining: it converts a community's waste into energy that the community then uses for electricity.[48] "Closing waste loops and recovering energy from waste presents a profound opportunity to simultaneously improve waste management and address climate change," according to David Babson, a technology manager at the U.S. Department of Energy's Bioenergy Technologies Office.[49]

There are more than 2000 anaerobic digestion sites in the United States, but only 40 to 50 of those sites exclusively process food waste.[50] In March 2016, ReFED, a data-driven nonprofit committed to reducing food waste in the United States,[51] used the EPA's Food Recovery Hierarchy as a starting point[52] in its analysis of the diversion potential of twenty-seven

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of food scraps to swine but does not impose regulations that are more stringent than the floor established by federal law. *Id.*; *see* Conn. Gen. Stat. §§ 22-320a–g.

[42] *Sustainable Management of Food: Industrial Uses for Wasted Food*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/industrial-uses-wasted-food [https://perma.cc/2XEL-XHNB] (last visited Jan. 4, 2018).

[43] *Basic Information About Anaerobic Digestion (AD)*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/anaerobic-digestion/basic-information-about-anaerobic-digestion-ad#HowADworks [https://perma.cc/GQ58-JYL7] (last visited Dec. 15, 2017).

[44] *Id.*

[45] Anaerobic digestion also produces a nutrient-rich fertilizer called digestate, which is a wet mixture that separates from the biogas during the digestion process. *Id.*

[46] *See* Sheridan Cyr, *Quantum Biopower Hits the Grid; Enters Production Phase*, SOUTHINGTON OBSERVER (Dec. 14, 2017), http://southingtonobserver.com/2017/12/14/quantum-biopower-hits-the-grid-enters-production-phase/ [https://perma.cc/D3Y2-6E82] (discussing how Quantum Biopower, an anaerobic digestion facility in Southington, Connecticut, will now be providing energy "to the local grid").

[47] Nathan Hurst, *Why Anaerobic Digestion Is Becoming the Next Big Renewable Energy Source*, SMITHSONIAN.COM (Nov. 3, 2016), https://www.smithsonianmag.com/innovation/why-anaerobic-digestion-becoming-next-big-renewable-energy-source-180960992/ [https://perma.cc/G5FV-6SYW].

[48] *Id.*

[49] *Id.*

[50] *Centralized Anaerobic Digestion (AD)*, REFED, http://www.refed.com/solutions/centralized-anaerobic-digestion [https://perma.cc/8SWB-HPTL] (last visited Jan. 9, 2018).

[51] *About ReFED*, REFED, http://www.refed.com/about [https://perma.cc/PN23-WWX7] (last visited Jan. 21, 2018).

[52] *Food Waste Is a Solvable Problem*, REFED, http://www.refed.com/solutions/?sort=diversion-potential [https://perma.cc/KJ7C-HEKH] (last visited Jan. 21, 2018).

waste solutions.[53] Centralized anaerobic digestion ranked second for greatest diversion potential with a 1.9-million ton diversion potential annually from landfills and on-farm losses,[54] second only to centralized composting.[55] While its diversion potential is great, anaerobic digestion is expensive. Total capital expenditure for a new facility is estimated at $36 million.[56] Although the EPA identifies that "[t]here is increasing interest in finding effective means to obtain biofuel and bio-products from wasted food,"[57] federal law does not specially support the infrastructure development necessary for the widespread use of anaerobic digestion facilities.

B. *Federal Agencies Promote Voluntary Programs*

In order to reach the nation's 50 percent reduction goal by 2030, the federal government needs to invest in the solutions identified in the EPA's Food Recovery Hierarchy. Instead, the EPA and USDA have placed the onus on the public through the creation of two voluntary programs.[58]

First, the EPA has called on schools and businesses to participate in its U.S. Food Loss and Waste Challenge (the Challenge), a voluntary program that encourages participants to conduct personal food waste audits, share best practices, and attain personal reduction goals.[59] In 2016, 950 participants and endorsers[60] "prevented and diverted over 740,000 tons of food waste from entering landfills or incinerators."[61] Of that, 85,000 tons

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[53] Solutions considered included Date Labeling, Consumer Education Campaigns, Donation Storage and Handling, Donation Matching Software, Donation Transportation, Value-Added Processing, Donation Liability Education, Safe Donation Regulation, Donation Tax Incentives, Home Composting, Community Composting, and Water Resources Recovery Facilities with Anaerobic Digestion. REFED, A ROADMAP TO REDUCE U.S. FOOD WASTE BY 20%: TECHNICAL APPENDIX 3, 21 (March 2016), https://www.refed.com/downloads/ReFED_Technical_Appendix.pdf [https://perma.cc/KKQ8-TXXT].

[54] *Id.* at 48.

[55] Centralized composting has a diversion potential of five million tons annually. *Id.* at 51.

[56] This figure is based on the capital costs for a 40,000-ton anaerobic digestion facility, including equipment for the anaerobic digestion, odor control, gas treatment, and internal combustion engines. Additionally, it includes costs for engineering and capital costs for composting the digestate. *Id*. at 53.

[57] *Sustainable Management of Food: Industrial Uses for Wasted Food*, *supra* note 42.

[58] *See USDA Food Waste Champions*, U.S. DRUG ADMIN., https://www.usda.gov/oce/foodwaste/Champions/index.htm [https://perma.cc/WQ7R-NX53] (last visited Jan. 4, 2018) ("Government alone cannot reach this goal. It will require effort and action from the entire food system.").

[59] *Sustainable Management of Food: Food Recovery Challenge (FRC)*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/food-recovery-challenge-frc#how [https://perma.cc/QYY6-A6MS] (last visited Jan.11, 2018).

[60] While participants are involved in the food prevention and reduction that count toward the program's results, endorsers are organizations and businesses that promote food sustainability through education. Connecticut's DEEP, for example, serves as an active endorser of the EPA's U.S. Food Loss and Waste Challenge. *Id.*

[61] *Sustainable Management of Food: Food Recovery Challenge Results and Award Winners*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sustainable-management-food/food-recovery-challenge-

of food were anaerobically digested.[62] Second, in November 2016, the USDA and EPA formed the U.S. Food Loss and Waste 2030 Champions, a corporate call for action comprised of "businesses and organizations that have made a public commitment to reduce food loss and waste in their own operations in the United States by 50 percent by the year 2030."[63]

The commitment from corporate America rightly places food waste prevention and reduction on the national stage.[64] The problem, however, is that these initiatives alone will not help the United States to reach its 50 percent reduction goal by 2030. A 740,000-ton reduction, while commendable, is a far cry from reaching, say, a 30-million ton reduction by 2030, which would have been 50 percent of the nation's total food waste in 2016.[65] The United States also needs a comprehensive wide-scale plan for the reduction of food waste.[66]

C. *Congress Considers "Bipartisan" Issue*

In May 2016, the House Committee on Agriculture held its first hearing on food waste—an issue that the hearing's chairman, Republican Congressman K. Michael Conaway, declared is bipartisan.[67] At this hearing, anaerobic digestion emerged as a key solution for food waste

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results-and-award-winners [https://perma.cc/4WQM-3CRJ] (last visited Jan. 4, 2018). As of January 2018, there were 595 active Challenge participants, including 290 food, drug, and convenience stores; 87 colleges or universities; 85 sports or entertainment venues; 4 government agencies; and 3 local governments. *Id.*

[62] *Id.*

[63] *USDA Food Waste Champions*, U.S. DEP'T OF AGRIC., https://www.usda.gov/oce/foodwaste/Champions/index.htm [https://perma.cc/D4KE-BY7V] (last visited Jan. 4, 2018). Notably, there is some overlap between participants of the EPA's Challenge and the EPA and USDA's Champions, including Aramark, Wegmans Food Market, and Yum! Brands. *Id.*; *Sustainable Management of Food: Food Recovery Challenge (FRC)*, *supra* note 59.

[64] Participants include the Boston Red Sox, Big Y Food, Inc., Dana Farber Cancer Institute, Denver International Airport, Disneyland Resort, HBO, MGM Resorts International, and Whole Foods Market, just to name a few. *Id.*

[65] *See* Chandler, *supra* note 1 ("[R]oughly 50 percent of all produce in the United States is thrown away—some 60 million tons (or $160 billion) worth of produce annually, an amount constituting 'one third of all foodstuffs.'").

[66] ReFED, "a collaboration of over 30 business, non-profit, foundation, and government leaders committed to reducing food waste in the United States," noted in its roadmap for food waste reduction that "[w]hile some solutions are gaining ground, the United States still lacks a comprehensive action plan to unleash a wide-scale national reduction in food waste." REFED, *supra* note 4, at 2, 10.

[67] Food waste is often met with bipartisan support because it is primarily presented as a way to end hunger, something that everyone wants. *Food Waste from Field to Table: Hearing Before the H. Comm. on Agric.*, 114th Cong. 2 (2016) [hereinafter *Food Waste*] (statement of Rep. K. Michael Conaway) ("Tackling food waste in this country is, and should be a non-partisan issue that will be most successful by engaging everyone in the food chain, from the field to the table."); *see also* Arthur Delaney, *We Waste So Much Food That Congress Might Actually Do Something*, HUFFPOST (July 6, 2016, 10:00 AM), https://www.huffingtonpost.com/entry/food-waste-date-labels-chellie-pingree_us_576a8deee4b0c0252e77c263 [https://perma.cc/G43B-Z47D] ("[R]epublicans and Democrats have found something they might be able to agree on: Garbage is bad.").

reduction,[68] a solution that also helps to reduce methane generation at landfills, to create nutrient-filled digestate for the soil, and to produce clean energy that can be sold for profit.[69] Those who testified in support of anaerobic digestion recognized that the lack of widespread infrastructure for it in the United States presents a financing hurdle.[70] Additionally, for anaerobic digestion facilities to be successful, infrastructure options must be "geographically and operationally feasible."[71] This is because the cost of transporting food waste, which is very wet and dense, to an anaerobic digestion facility can be cost prohibitive, unless the facility is located close to the source of waste origin.[72]

Just over a year later, one of the hearing's participants, Representative Chellie Pingree, a Democrat from Maine, whom Chairman Conaway credited for putting food waste on the Committee of Agriculture's radar,[73] made another big move. On July 27, 2017, Representative Pingree and Senator Richard Blumenthal, a Democrat from Connecticut, introduced

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[68] *E.g.*, *Food Waste*, *supra* note 67, at 47 (2016) (statements of Jesse M. Fink, Managing Director, MissionPoint Partners LLC, Norwalk, CT; on behalf of ReFED: Rethink Food Waste Through Economics and Data; and Meghan B. Stasz, Senior Director, Sustainability, Grocery Manufacturers Assoc., Washington, D.C.; on behalf of Food Waste Reduction Alliance).

Additionally, many testified in support of the standardization of date labels on food. *E.g.*, *id.* at 7, 18 (statements of Rep. Chellie Pingree; and Jesse M. Fink, Managing Director, MissionPoint Partners LLC, Norwalk, CT; on behalf of ReFED). There is widespread agreement that date labels, such as "sell by," "use by," and "best before," confuse consumers, who may then dispose of food unnecessarily. While "sell by" dates are intended to communicate with grocers as "a tool for stock control," "use by" and "best before" dates are more estimates of a product's peak quality and not when a food will become unsafe. A report coauthored by the Natural Resources Defense Council and Harvard Law School's Food Law and Policy Clinic found that "[m]ore than 90 percent of Americans may be prematurely tossing food because they misinterpret food labels as indicators of food safety." *New Report: Food Expiration Date Confusion Causing Up to 90% of Americans to Waste Food*, Press Release, NAT. RES. DEF. COUNCIL (Sept. 18, 2013), https://www.nrdc.org/media/2013/130918 [https://perma.cc/MD7K-JC6P]. There are currently no national guidelines for dated food labels, with the exception of infant formula. *Id.* The diversion potential of standardizing date labeling is far less than anaerobic digestion, at roughly 400,000 tons annually. REFED, *supra* note 53, at 27, 48.

[69] *Food Waste*, *supra* note 67, at 16 (statement of Dana Gunders, Senior Scientist, Food and Agriculture, Natural Resources Defense Council).

[70] *E.g.*, *id.*

[71] *Id.* at 47 (statement of Meghan B. Stasz, Senior Director, Sustainability, Grocery Manufacturers Assoc., Washington, D.C.; on behalf of Food Waste Reduction Alliance).

[72] *See id.* ("[F]WRA's [Food Waste Reduction Alliance] 2014 Assessment found that 70% of manufacturers, 92% of retailers, 83% of small restaurants and 100% of large restaurants surveyed listed 'insufficient recycling options' as their number one barrier to diverting food waste from landfill."); *see also id.* at 31 (statement from Jesse M. Fink, Managing Director, MissionPoint Partners LLC, Norwalk, CT; on behalf of ReFED: Rethink Food Waste Through Economics and Data) (testifying that (1) siting facilities near urban centers and optimizing hauling routes are important to ensure a facility's steady flow of organic materials; and (2) building facilities in the Northeast, Northwest, and Midwest presents "the most [e]conomic [v]alue from recycling due to high landfill disposal fees and high compost and energy market prices").

[73] *See id.* at 2 (statement of Hon. K. Michael Conaway, Congressman from Texas) ("[I] commend my colleague from Maine, Chellie Pingree, for putting this on the Congressional radar.").

H.R. 3444, the Food Recovery Act of 2017. This landmark bicameral legislation calls for the reduction of food waste through measures that "ensure that more of our food is put to use rather than going to waste."[74] In addition to requiring actions like the standardization of date labeling and reducing waste in schools by encouraging cafeterias to purchase lower-cost "ugly" fruit and vegetables,[75] the Food Recovery Act would amend the Consolidated Farm Rural Development Act, 7 U.S.C. § 1926(a)(1), in two significant ways.

First, under the Food Recovery Act, the Consolidated Farm Rural Development Act would identify, for the first time, composting and anaerobic digestion as "essential community facilities."[76] This classification would fortify the United States' commitment to food waste reduction by recognizing that these waste disposal methods are vital to our local communities. Second, under the Food Recovery Act, the Consolidated Farm Rural Development Act would require that 5 percent of the funds earmarked for essential community facility funding should be reserved for loans "for municipal or county composting, *anaerobic digestion food waste-to-energy projects*, and the conversion of animal waste products into industrial products or into raw materials . . . ."[77] It also would make an additional $50 million available annually for loans.[78] This unprecedented access to funding would go a long way toward making it easier for entities to surmount the financing hurdle that anaerobic digestion presents.

The passing of the Food Recovery Act would provide critical capital investment to solutions identified in the EPA's Food Recovery Hierarchy. Unfortunately, the Food Recovery Act has not moved out of committee in

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[74] Press Release, Congresswoman Chellie Pingree 1st District of Maine, Congresswoman Pingree Introduces Bicameral Food Recovery Act (July 31, 2017), https://pingree.house.gov/media-center/press-releases/congresswoman-pingree-intorduces-bicameral-food-recovery-act [https://perma.cc/2TB6-PKYT].

[75] H.R. 3444, 115th Cong. §§ 401–406, 301–305.

[76] H.R. 3444, 115th Cong. § 502 (2017). Consolidated Farm Rural Development Act, 7 U.S.C. § 1926(a)(1), currently reads:

> The Secretary is also authorized to make or insure loans to associations . . . for the application or establishment of soil conservation practices, shifts in land use, the conservation, development, use, and control of water, and the installation or improvement of drainage or waste disposal facilities, recreational developments, and essential community facilities including necessary related equipment, all primarily serving farmers, ranchers, farm tenants, farm laborers, rural businesses, and other rural residents, and to furnish financial assistance or other aid in planning projects for such purposes.

[77] H.R. 3444, 115th Cong. § 502 (2017) (emphasis added).

[78] The $50 million would come from funds allocated to the government-owned Commodity Credit Corporation. *Id.*

either the House or Senate.[79] And despite Chairman Conaway's claim that food waste is a bipartisan issue, so far Representative Pingree's twenty-six cosponsors in the House[80] and Senator Blumenthal's four cosponsors in the Senate are all Democrats.[81] Until Congress passes legislation, it is up to individual states to ensure that food waste reduction actually happens.[82]

II. CONNECTICUT COMMITS TO FOOD WASTE DIVERSION

Well before the United States and the United Nations pledged to reduce food waste, Connecticut became the first state to pass legislation to reduce food waste through state-mandated diversion.[83] Connecticut's

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[79] *All Actions Except Amendments H.R. 3444 — 115th Congress (2017–2018)*, CONGRESS.GOV, https://www.congress.gov/bill/115th-congress/house-bill/3444/all-actions-without-amendments [https://perma.cc/78WG-7VVJ] (last visited Jan. 31, 2018); *All Actions Except Amendments H.R. 3444 — 115th Congress (2017–2018)*, CONGRESS.GOV, https://www.congress.gov/bill/115th-congress/house-bill/3444/all-actions-without-amendments [https://perma.cc/9HM9-KMMR] (last visited Jan. 31, 2018).

[80] *Cosponsors: H.R. 3444 — 115th Congress (2017–2018)*, CONGRESS.GOV, https://www.congress.gov/bill/115th-congress/house-bill/3444/cosponsors [https://perma.cc/Z4N2-3LR8] (last visited Jan. 31, 2018).

[81] *Cosponsors: S. 1680 — 115th Congress (2017–18)*, CONGRESS.GOV, https://www.congress.gov/bill/115th-congress/senate-bill/1680/cosponsors [https://perma.cc/363S-BUVN] (last visited Jan. 31, 2018).

[82] Only five states structure their laws as organic waste bans: California, CAL. PUB. RES. CODE § 42649.81 (West, Westlaw through Ch. 2 of 2018 Reg. Sess.) (effective 2016); Connecticut, CONN. GEN. STAT. § 22a-226e (West, Westlaw through the 2017 June Special Sess.) (effective 2014); Massachusetts, 310 MASS. CODE REGS. 19.017 (West, Westlaw through Reg. No. 1356, Jan. 12, 2018) (effective 2014); Rhode Island, 23 R.I. GEN. LAWS § 18.9–17 (West, Westlaw through Ch. 480 of the Jan. 2017 Sess.) (effective 2016); and Vermont, VT. STA. ANN. tit. 10, § 6605k (West, Westlaw through the 2017 Legis. Sess.) (effective 2014). Four American cities also have city ordinances: New York City, New York (effective 2015); Portland, Oregon (effective 2014); San Francisco, California (effective 2009); and Seattle, Washington (effective 2015). U.S. ENVTL. PROT. AGENCY OFFICE OF RES. CONSERVATION & RECOVERY, FOOD WASTE MANAGEMENT IN THE UNITED STATES, 2014 9 (2016), https://www.epa.gov/sites/production/files/2016-12/documents/food_waste_management_2014_12082016_508.pdf [https://perma.cc/DZT9-HZAM]; *see generally* Daniel K. Lee & Timothy P. Duane, *Putting the Dormant Commerce Clause Back to Sleep: Adapting the Doctrine to Support State Renewable Portfolio Standards*, 43 ENVTL. L. 295, 297 (2013) (arguing that the responsibility has fallen on the states to serve as the "'laboratories' for testing various policy mechanism in pursuit of protecting the environment").

[83] *See* CONN. DEP'T OF ENERGY & ENVTL. PROT., 2016 COMPREHENSIVE MATERIALS MANAGEMENT STRATEGY: THE CONNECTICUT SOLID WASTE MANAGEMENT PLAN 9 (2016), [hereinafter THE PLAN], http://www.ct.gov/deep/lib/deep/waste_management_and_disposal/Solid_Waste_Management_Plan/CMMS-Final_Adopted_Comprehensive_Materials_Management_Strategy.pdf [https://perma.cc/Y2JZ-XXQR] (citation omitted) ("Connecticut set the stage for expanding our processing capacity for food scraps and potential for reducing waste burned at the resources recovery facilities with a first-in-the-nation mandate for commercial organics recycling."); Patrick Serfass, *Vermont, Now Connecticut, Models for Diverting Organics*, BIOMASS MAG. (July 1, 2013), http://biomassmagazine.com/articles/9153/vermont-now-connecticut-models-for-diverting-organics/ [https://perma.cc/H3FY-X6Q3] ("Connecticut got the ball rolling in October 2011 with the passage of Public Act 11–217, which required large commercial waste generators . . . to divert food waste if they were within 20 miles of a licensed facility."); Nicholas M. Vaz, Comment, *Are You*

interest in food waste reduction stemmed from its realization that food waste was the largest component of its MSW.[84] Today, Connecticut is one of five states that has passed either a waste ban or waste-recycling law for food waste that restricts entities that generate a specified amount of food waste from sending this waste to landfills, subject to certain exceptions.[85] These laws are important examples of American federalism: the use of state-based experimentation to address a pressing national problem.

This Part discusses the widespread belief in Connecticut that anaerobic digestion will rescue the state from its food waste problem by offering an environmentally conscious alternative to landfilling with the benefit of creating jobs and providing a renewable energy source.[86] This Part further argues that Connecticut structured its organic materials recycling law, Public Act 13-285, to guarantee that there would be product to support the state's nascent anaerobic digestion industry.

A. *Legislation Creates Organics Recycling Market*

In 2011, with the passage of Public Act 11-217, Connecticut did something that many hailed as "genius."[87] It required large commercial waste generators producing more than 104 tons of source-separated materials to divert that waste to a permitted source-separated organic-material composting facility if they were within twenty miles of a licensed facility.[88] Source-separated organics means "food waste or yard waste . . . that can be separated by the waste generator."[89] Connecticut's requirement, though, only became effective six months after two licensed facilities could accept the material.[90] This requirement is "what many hail as the law's genius."[91] In essence, Connecticut was relying on the market to

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Gonna Eat That?: A New Wave of Mandatory Recycling Has Massachusetts and Other New England States Paving the Way Toward Feasible Food Waste Diversion and a New Player in Alternative Energy, 26 VILL. ENVTL. L.J. 193, 200 (2015) (arguing that Connecticut "paved the way for mandated diversion of food waste" with its passage of Public Act 11-217).

[84] Brenda Platt, *Connecticut—Organics Recycling Mandate*, INST. FOR LOCAL SELF-RELIANCE (Apr. 15, 2016), https://ilsr.org/rule/food-scrap-ban/Connecticut-organics-recovery/ [https://perma.cc/9Y9C-6QWT].

[85] U.S. ENVTL. PROT. AGENCY OFFICE OF RES. CONSERVATION & RECOVERY, *supra* note 82.

[86] *See* Jan Ellen Spiegel, *Looks Like an Onion Skin, But It Could Be Electricity*, CT MIRROR (Apr. 30, 2012), https://ctmirror.org/2012/04/30/looks-onion-skin-it-could-be-electricity/ [https://perma.cc/N4AG-DKSL] ("Connecticut views anaerobic digester technologies as drivers for green jobs and new industry, said Diane Duva, assistant director of waste engineering at DEEP.").

[87] *Id.*

[88] 2011 Conn. Acts 11-217 (Reg. Sess.).

[89] *See* Serfass, *supra* note 83; *see also* CONN. GEN. STAT. § 22a–207(30) (defining source-separated organic material to "mean[] organic material, including, but not limited to, food scraps, food processing residue and soiled or unrecyclable paper that has been separated at the point or source of generation from nonorganic material").

[90] 2011 Conn. Acts 11-217 (Reg. Sess.).

[91] Spiegel, *supra* note 86.

ensure the development of processing facilities for food waste, but once the facilities were built, the law guaranteed that there would be product to support them.[92] In 2013, Connecticut slightly amended this law with the passage of Public Act 13-285, which maintained the 104-ton-per-year starting point for commercial generators and reduced this quota to 52 tons per year in 2020.[93]

Public Act 13-285 supports Connecticut's commitment to achieving 60 percent diversion of solid waste from disposal by 2024.[94] Connecticut has recognized that an increase in organic recycling requires that it have the infrastructure to handle this increase in processing.[95] Specifically, DEEP has identified the development of anaerobic digestion facilities as one of the state's "top growth priorities."[96] Connecticut also views its investment in anaerobic digester technologies as a "driver[] for green jobs and new industry."[97] Public Act 13-285, thus, was named aptly *An Act Concerning Recycling and Jobs*.[98] Studies support Connecticut's position that the handling of organics through recycling, as opposed to landfilling, creates job opportunities.[99]

With much on the line—addressing the state's food waste problem, developing an organics recycling market, and creating green jobs—Connecticut has supported the state's development of anaerobic digestion facilities through the Connecticut Green Bank, the nation's first green bank,[100] *infra* Part II.B., and through the triggers in Public Act 13-285, an organic waste ban that functions as a flow control law that favors in-state businesses, *infra* Part II.C.

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[92] *See* Serfass, *supra* note 83 (arguing in support of the sustainability of Connecticut's model because it creates a market by "ensur[ing] that if a developer builds a system nearby, they'll have organic waste to feed it"). *But see*, John Turner, *The Flow Control of Solid Waste and the Commerce Clause:* Carbone *and Its Progeny*, 7 VILL. ENVTL. L.J. 203, 208 (1996) ("Flow control measures often result in a significant 'takings' issue, if not in the constitutional sense, at least from the standpoint of fairness. . . . When one jurisdiction establishes flow control, other facilities immediately have current and potential customer assets pulled away.").

[93] 2013 Conn. Acts 13-285 § 4(a)(2) (Reg. Sess.). The law exempts "[a]ny wholesaler, distributer, manufacturer, processor, supermarket, resort or conference center that performs composting of source-separated organic materials on site or treats source-separated organic materials via on-site organic treatment equipment . . . ." CONN. GEN. STAT. § 22a-226e(b) (2017).

[94] THE PLAN, *supra* note 83, at 7.

[95] *Id.* at 19.

[96] *Id.*

[97] Spiegel, *supra* note 86.

[98] 2013 Conn. Acts 13-285 (Reg. Sess.).

[99] Spiegel, *supra* note 86; *see, e.g.*, REFED, *supra* note 4, at 56 ("For every million tons of organic matter composted, nearly 1,400 new jobs can be sustained using the finished compost in green infrastructure." (citation omitted)).

[100] *About Us: Changing Connecticut for the Greener*, CONN. GREEN BANK, http://www.ctgreenbank.com/about-us-2017/ [https://perma.cc/RP9L-JE3Q] (last visited Jan. 10, 2018).

B. *The Connecticut Green Bank Provides Funding*

In 2011, to promote the development of an anaerobic digestion industry in Connecticut, Connecticut created the Clean Energy Finance and Investment Authority (CEFIA) under Public Act 11-80.[101] CEFIA would eventually be given a broader mandate and become the Connecticut Green Bank.[102] The Connecticut Green Bank—the nation's first green bank—is a quasi-public company that leverages "limited public dollars to attract private capital investment in clean energy projects."[103] Since its inception, Connecticut Green Bank has invested more than $1 billion in the state's clean energy.[104]

Public Act 11-80, Section 103(b) empowered CEFIA to "establish a three-year pilot program to support through loans, grants or power purchase agreements sustainable practices and economic prosperity of Connecticut farms and other businesses by using organic waste with on-site anaerobic digestion facilities to generate electricity and heat."[105] Furthermore, CEFIA was authorized to allocate $2 million annually for anaerobic digestion projects[106] for no more than five projects.[107] In 2012, this pilot program was extended to five years, ending in 2017.[108] Quantum Biopower, Connecticut's first anaerobic digestion facility in Southington, for example, received a $2 million lower-interest loan from Connecticut Green Bank for its $14 million project.[109]

Notably, Public Act 11-80 also created the Connecticut DEEP by consolidating the Department of Environmental Protection and Department of Public Utility Control.[110] Connecticut's creation of DEEP reflects the State's position that the preservation of its natural resources is inextricably intertwined with its energy usage and production. The relative newness of DEEP, however, has resulted in a slow permit process for anaerobic

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[101] 2011 Conn. Acts 11-80, § 103, 211–12.

[102] *About Us: Changing Connecticut for the Greener*, *supra* note 100.

[103] *Id.*

[104] Since its inception, "for every $1 of public funds committed by the Green Bank . . . an additional $6 in private investment occurred in the economy." *Id.*; *see also* CONN. GREEN BANK, ANNUAL REPORT 2016: BUILDING A STRONGER CONNECTICUT 5 (2016), http://www.ctgreenbank.com/fy16-annual-report/ [https://perma.cc/PV3V-S93Q] (detailing how, in 2016, the Connecticut Green Bank's public-private partnerships in clean energy projects and programs created an additional 4,444 jobs).

[105] 2011 Conn. Acts 11-80, § 103(b), 212 (Reg. Sess.).

[106] *Id.* at § 103(d), 212.

[107] *Id*.

[108] 2015 Conn. Acts 15-152 2 (Reg. Sess.)

[109] *Quantum Biopower Unveils Connecticut's First Food-Waste-to-Energy Facility*, QUANTUM BIOPOWER, http://www.quantumbiopower.com/about-us-2/news/quantum-biopower-unveils-connecticuts-first-food-waste-energy-facility/ [https://perma.cc/FGM3-H6KA] (last visited Jan. 10, 2018).

[110] 2011 Conn. Acts 11-80 1 (Reg. Sess.)

digestion facilities.[111] DEEP has been working to address the regulatory factors that have burdened or discouraged the development of anaerobic digestion.[112]

C. *Organics Recycling Mandate Favors Local Businesses*

In addition to making financing available through the Connecticut Green Bank, Connecticut supports anaerobic digestion through Public Act 13-285, a flow-control law governing the recycling of organic materials.[113] This law favors in-state businesses in three primary ways.

1. *Permit Requirement*

Waste generators are permitted to recycle organic materials only "at any *authorized* source-separated organic-material composting facility."[114] A "composting facility" is a facility that uses either composting or anaerobic digestion to process organic materials.[115] Connecticut mandates that composting facilities receiving Connecticut's organic waste must obtain permits administered by DEEP's Bureau of Materials Management and Compliance Assurance.[116] This means that facilities receiving Connecticut's waste must be located in Connecticut.

Theoretically, DEEP says that a Connecticut entity could transport its organic materials to an out-of-state facility, contingent on the facility meeting basic compliance standards, as determined by DEEP.[117] Organic materials are dense and heavy, so the cost of transporting this waste to a facility farther than the local Connecticut-based facility would be expensive, making it unlikely that an entity would use an out-of-state facility unless that facility were the closer of the two facilities.[118]

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[111] *See, e.g.*, Jan Ellen Spiegel, *Recycling Food Waste in Connecticut: Slow as Molasses*, CT MIRROR (Apr. 11, 2016), https://ctmirror.org/2016/04/11/recycling-food-waste-in-connecticut-slow-as-molasses/ [https://perma.cc/Y2UP-MHPM] (reporting how Quantum Biopower submitted its permits for approval in late 2013, and in April 2016, twenty-six months later, it was still waiting to receive permitting).

[112] THE PLAN, *supra* note 83, at 52–53.

[113] *See* CONN. GEN. STAT. § 22a-226e (codifying Public Act 13-285).

[114] *Id.* § (a)(1)(B) (emphasis added).

[115] *See* CONN. GEN. STAT. § 22a-207(29) (2017) (defining "composting facility" as that which "us[es] a process of accelerated biological decomposition of organic material under controlled aerobic or anaerobic conditions").

[116] *Solid Waste Facility: An Environmental Permitting Fact Sheet*, CONN. DEP'T OF ENERGY & ENVTL. PROT., http://www.ct.gov/deep/cwp/view.asp?a=2709&q=324200&deepNav_GID=1643 [https://perma.cc/9U3T-F42N] (last visited Dec. 19, 2017).

[117] Telephone Interview with Sherill Baldwin, Environmental Analyst, Conn. Dep't of Energy & Envtl. Prot. (Jan. 8, 2018).

[118] *Id.*

2. *Proximity Trigger*

Connecticut creates a proximity trigger to the mandate by requiring disposal for waste generators that meet a tonnage threshold *and* are located not more than twenty miles from an authorized facility.[119] In conjunction with the permit requirement, this restriction effectively requires that facilities competing in Connecticut's market must be located in Connecticut.[120] Otherwise, a facility's out-of-state location may fail to trigger the law's geographic and tonnage requirements for Connecticut entities. This places in-state anaerobic digestion facilities at a competitive advantage because only their proximity to a business generating the tonnage quota can trigger the mandate. Furthermore, as discussed *supra* Section C.1, transporting organic materials can be cost prohibitive. This cost would deter an entity from transporting its waste anywhere except the state-authorized facility located not more than twenty miles away. Effectively, therefore, the law requires that entities that fall within the law send their organic materials to the facilities that Connecticut authorizes.

3. *Tonnage Trigger*

Public Act 13-285 guarantees waste flow to authorized facilities through its waste tonnage requirements for commercial generators.[121] Any commercial food wholesaler or distributer, industrial food manufacturer or processor, supermarket, resort, or conference center that produces 104 tons of organic materials each year, or 52 tons per year as of 2020, triggers this tonnage requirement.[122] If a commercial generator triggers the tonnage requirement *and* is within twenty miles of an authorized source-separated composting facility, then it must recycle its organic materials at an authorized facility—that is, a facility located in Connecticut.[123] This tonnage trigger hoards all organic materials from these businesses for those facilities that Connecticut authorizes, thereby ensuring that there is product to sustain those facilities.

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[119] CONN. GEN. STAT. §§ 22a-226e(a)(1)–(2) (2017).

[120] Currently, Connecticut has one operational anaerobic digestion facility, Quantum Biopower; two facilities under construction; and one planned for construction. Central locations, such as the two anaerobic digestion facilities in Southington, Connecticut, and sites near cities, like the permitted facilities in Bridgeport and North Haven, appear most desirable for client acquisition. *See Food Waste Composting Facilities*, CONN. DEP'T OF ENERGY & ENVTL. PROT., http://www.ct.gov/deep/cwp/view.asp?a=2718&q=325376&deepNav_GID=1645 [https://perma.cc/MH2V-HJJW] (last visited Dec. 19, 2017) (identifying the permitted composting and anaerobic digestion facilities in Connecticut).

[121] CONN. GEN. STAT. §§ 22a-226e(a)(1)–(2) (2017).

[122] *Id.*

[123] *See Food Waste Composting Facilities*, *supra* note 120 (identifying the permitted composting and anaerobic digestion facilities in Connecticut).

Much of central and eastern Connecticut remains exempt from the requirements of Connecticut's organic waste ban because there are no approved facilities in those areas.[124] Thus, the law cannot hoard the organic materials in these areas. That said, given the amount of organic materials in Connecticut's MSW, these regions are likely landfilling their organic materials.

In these three ways—the permit requirement, the proximity trigger, and tonnage trigger—Connecticut's organic waste ban promotes the recycling of organic materials by ensuring that in-state, and not out-of-state, facilities are receiving Connecticut's organic materials. Connecticut Green Bank also has promoted its composting facilities by making millions of dollars in loans available to investors. But in promoting a homegrown organics recycling market, Connecticut may have run afoul of the Dormant Commerce Clause.[125]

III. THE DORMANT COMMERCE CLAUSE: STATES SINK OR SWIM TOGETHER

In the United States Constitution, the Commerce Clause provides that "Congress shall have Power . . . [t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes . . . ."[126] The United States Supreme Court has "long interpreted the Commerce Clause as an implicit restraint on state authority, even in the absence of a conflicting federal statute."[127] This implicit restraint is referred to as the "dormant" aspect of the Commerce Clause.[128] The Dormant Commerce Clause protects the belief that "one state in its dealings with another may not place itself in a position of economic isolation."[129] Instead, the Court has held that the Constitution "was framed upon the theory that the peoples of the several states must sink or swim together, and that in the long run prosperity and salvation are in union and not division."[130] This idea of economic, national unity animates the Dormant Commerce Clause.[131]

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[124] *Id.*

[125] *See* C & A Carbone, Inc. v. Town of Clarkstown, 511 U.S. 383, 391 (1994) (holding that a flow control ordinance, which requires all solid waste to be processed at a designated transfer station before leaving the municipality, "is just one more instance of local processing requirements that we long have held invalid").

[126] U.S. CONST. art. I, § 8, cl. 3.

[127] United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 338 (2007).

[128] *Id.*

[129] Baldwin v. G.A.F. Seelig, Inc., 294 U.S. 511, 527 (1935).

[130] *Id.* at 523.

[131] *See, e.g.*, *id.* at 527–28 (holding that New York's Milk Control Act, which prohibited the sale of milk imported from another state unless it was sold at a set price, was a direct and unconstitutional burden on interstate commerce in violation of the Dormant Commerce Clause).

As Part I discusses, when it comes to food waste, the federal government, by and large, has left the states to swim alone in unchartered waters.[132] There are, though, two United States Supreme Court cases that deal specifically with the legality of flow control: *C & A Carbone, Inc. v. Town of Clarkstown*[133] and *United Haulers Association, Inc. v. Oneida-Herkimer Solid Waste Management Authority*.[134] This Part first considers these two cases and, then, suggests that Connecticut's Public Act 13-285 looks similar to the ordinance that the Court struck down in *Carbone* as violating the Dormant Commerce Clause. Despite this similarity, in the face of Congress' inaction in regards to food waste reduction, this Part argues that there should be deference to state experimentation on this issue given the important role states play as innovators and protectors of the environment. In its final Section, this Part provides solutions for how to save Connecticut's organic waste ban from running afoul of the Dormant Commerce Clause.

A. *Supreme Court Invalidates Local Flow Ordinance*

In 1994, in *Carbone*, the Court invalidated a local flow ordinance on the grounds that it was facially discriminatory under the Dormant Commerce Clause.[135] The town of Clarkstown, New York had agreed to close its landfill and a local private contractor had agreed to construct a private recycling facility, which would revert to municipal ownership after five years.[136] Until that happened, though, the town: (1) guaranteed a minimum waste flow of 120,000 tons to amortize the costs of the private facility; and (2) made noncompliance punishable by fine and imprisonment.[137]

The Court's Dormant Commerce Clause analysis considered two questions. [138] First, did the flow control ordinance discriminate against interstate commerce? [139] Second, was the burden on interstate commerce "clearly excessive in relation to the putative local benefits"?[140]

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[132] *See* Sam Kalen, *Dormancy Versus Innovation: A Next Generation Dormant Commerce Clause*, 65 OKLA. L. REV. 381, 425–26 (2013) (arguing that state and local communities are exploring innovative solutions to society's modern challenges alone, which will test the contours of the current Dormant Commerce Clause analysis).

[133] 511 U.S. 383, 386 (1994).

[134] 550 U.S. 330, 334 (2007).

[135] *Carbone*, 511 U.S. at 392.

[136] *Id.* at 387.

[137] *Id.*

[138] *Id.* at 390.

[139] *Id.*

[140] *Id.* The Court's two-tiered analysis applied the analytical framework of the Court's decision in *City of Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978), where the Court struck down as unconstitutional a New Jersey ban on the importation of waste from other states. *Id.*

The first tier of inquiry, the per se invalid test, subjects a facially discriminatory regulation to a strict and nondeferential standard of review.[141] A court will apply per se invalid analysis to three different types of discrimination: (1) where a law facially discriminates by treating differently in-state and out-of-state economic interests to the economic advantage of the former; (2) where a facially neutral law was enacted for the purpose of economic protectionism; and (3) where "a facially neutral law has obvious discriminatory effects."[142] If a statute passes the per se invalid analysis, then a court may still find a constitutional violation under the second tier of inquiry—known as the *Pike* balancing test—which inquires whether the "burden [imposed] on interstate commerce . . . is clearly excessive in relation to the putative local benefits."[143]

The *Carbone* Court concluded that the town's flow control ordinance hoarded a local resource by preventing local businesses from sending already sorted recyclables directly out-of-state for processing, even though the law equally discriminated against out-of-town and in-state processors.[144] The ordinance, therefore, affected interstate commerce by prohibiting out-of-state competition and by driving up the costs for out-of-state interests to dispose of their waste.[145] It did not matter that there was no evidence that out-of-state "firms were economically disadvantaged compared to in-state firms."[146] It also did not matter that the town cited both environmental protection and financing measures as legitimate reasons for its ordinance.[147] Because the town had alternative, nondiscriminatory ways to address its health and environmental problems, such as enacting safety regulations, the Court found a violation of the Dormant Commerce Clause and never reached the excessive-burden inquiry.[148]

The ordinance's "*purpose* to distort competition [was] objectionable precisely because the *effect*—distortion of competition—is constitutionally

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[141] Philadelphia v. New Jersey, 437 U.S. at 624 ("Thus, where simple economic protectionism is effected by state legislation, a virtually *per se* rule of invalidity has been erected.").

[142] Bradford C. Mank, *Are Public Facilities Different from Private Ones?: Adopting a New Standard of Review for the Dormant Commerce Clause*, 60 SMU L. REV. 157, 163–64 (2007).

[143] *Carbone*, 511 U.S. at 390 (internal quotation marks omitted) (citing Pike v. Bruce Church, Inc., 397 U.S. 137, 142 (1970)); *see also* Anthony L. Moffa & Stephanie L. Safdi, *Freedom from the Costs of Trade: A Principled Argument Against Dormant Commerce Clause Scrutiny of Goods Movement Policies*, 21 N.Y.U. ENVTL. L.J. 344, 363 (2014) ("In practice, this balancing test has proved unworkable, as the Supreme Court has effectively collapsed both tests into a single screen that roots out 'protectionist' legislation.").

[144] *Carbone*, 511 U.S. at 390–91 ("With respect to this stream of commerce, the flow control ordinance discriminates, for it allows only the favored operator to process waste that is within the limits of the town.").

[145] *Id.* at 389.

[146] Mank, *supra* note 142, at 176 (citation omitted).

[147] *Carbone*, 511 U.S. at 393.

[148] *Id.* at 386, 393.

proscribed."[149] This kind of local economic protectionism "is per se invalid, save in a narrow class of cases in which the municipality can demonstrate, under rigorous scrutiny, that it has no other means to advance a legitimate local interest."[150] Under *Carbone*, a state carries a heavy burden of proving that its statutory scheme effectuates a legitimate public interest, particularly because a mere environmental objective on the grounds of protectionism will not satisfy this requirement.[151]

The *Carbone* Court's prohibition of a town's local flow control ordinance reflects a "growth of the [D]ormant [C]ommerce [C]lause" to extend to environmental and waste disposal practices.[152] With this growth, there has been "a concomitant contraction of the states' ability to regulate within the sphere of interstate commercial activity."[153] The Court's imposition of "a virtually per se rule of invalidity"[154] places state and local regulations aimed at environmental protection in a vulnerable position, leading some scholars to argue that "laudable environmental motives or achievements [could] become irrelevant."[155]

B. *Publicly Owned Waste Facilities May Favor Local Government*

Over a decade later, in *United Haulers*, the Court narrowed its holding in *Carbone* by determining for the first time that public and private entities should not be regarded "with equal skepticism."[156] *United Haulers* was another flow control ordinance case with one salient difference: the laws at

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[149] Daniel Francis, *The Decline of the Dormant Commerce Clause*, 94 DENV. U. L. REV. 255, 287 (2017); *see also* Catherine Gage O'Grady, *Targeting State Protectionism Instead of Interstate Discrimination Under the Dormant Commerce Clause*, 34 SAN DIEGO L. REV. 571, 580 (1997) ("The intentional, self-serving nature of a typical protectionist measure is likely to invoke anxiety in other states and invite hostile, retaliatory measures. In evaluating a state statute for protectionism, the focus ought to be on whether the state enacted the statute because it intended to isolate itself and/or protect a segment of its industry from competition on the interstate market." (internal citation omitted)).

[150] *Carbone*, 511 U.S. at 392 (citation omitted).

[151] C.M.A. McCauliff, *The Environment Held in Trust for Future Generations or the Dormant Commerce Clause Held Hostage to the Invisible Hand of the Market?*, 40 VILL. L. REV. 645, 662 (1995).

[152] Christine A. Klein, *The Environmental Commerce Clause*, 27 HARV. ENVTL. L. REV. 1, 48–49 (2003).

[153] *Id.* at 48.

[154] *Carbone*, 511 U.S. at 422 (1994) (Souter, J., dissenting) (internal quotation and citation omitted).

[155] Klein, *supra* note 152, at 49 (citation omitted); *see*, *e.g.*, McCauliff, *supra* note 151, at 683–84 (stating that "the public interest is damaged by too aggressive an extension of the dormant Commerce Clause"); Andrew D. Thompson, Note, *Public Health, Environmental Protection, and the Dormant Commerce Clause: Maintaining State Sovereignty in the Federalist Structure*, 55 CASE W. RES. L. REV. 213, 216 (2004) ("In its resolve to expose the underlying intent of resource protectionism, however, the Court has espoused a standard that has been interpreted to invalidate state environmental laws that pertain significantly to public health.").

[156] United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 343 (2007).

issue required haulers to bring waste to facilities owned and operated by a state-created public benefit corporation, effectively excluding all other businesses, foreign and domestic, for competing for the counties' business.[157] For a plurality of the Court, this difference was determinative.

While laws favoring "in-state business over out-of-state competition" should be reviewed under strict scrutiny, "[l]aws favoring local government, by contrast, may be directed toward any number of legitimate goals unrelated to [economic] protectionism."[158] Thus, where waste regulation is a local government function involving public entities, "[t]he [D]ormant Commerce Clause is not a roving license" for judicial oversight and review.[159] Instead, democratic processes provide "citizens and businesses . . . [that] bear the costs of the ordinances" sufficient protection against discrimination and the more lenient *Pike* balancing test should be applied.[160] Any incidental burden on interstate commerce that does not outweigh the benefits conferred by the regulation will likely withstand scrutiny.[161]

The Court determined that the waste flow ordinances served sufficient public benefit by financing the waste disposal services, "increas[ing] recycling . . . [and] conferring significant health and environmental benefits upon the citizens of the Counties."[162] The Court further determined that if the haulers could take waste to any disposal site—and not the site proscribed under the ordinances—recycling "enforcement would be much more costly, if not impossible."[163]

The Court's decision in *United Haulers*, according to Justice Clarence Thomas, underscores the problem with the Dormant Commerce Clause: it "has proven unworkable in practice."[164] It has become a vehicle for judicial activism and, therefore, vulnerable to the Court's shifting policy preferences.[165] Justice Thomas argued that it is not the Court's purview to express, as it does in *United Haulers*, what can only be "a policy-driven

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[157] *Id.* at 334.

[158] *Id.* at 343.

[159] *Id.*

[160] *Id.* at 345–46 (internal quotation marks and citation omitted).

[161] *Id.* at 334.

[162] *Id.* at 346–47.

[163] *Id.* at 347.

[164] *Id.* at 349 (Thomas, J., concurring).

[165] *Id.* at 351; *see* Laura Gabrysch, Note, *Constitutional Law—Dormant Commerce Clause—Flow Control Ordinances That Require Disposal of Trash at a Designated Facility Violate the Dormant Commerce Clause*, 26 ST. MARY'S L.J. 563, 592 (1995) ("[T]he Carbone decision indicates the Court's willingness to make policy judgments which should fall under the domain of the legislature and not that of the judiciary. The tests used for both levels of Dormant Commerce Clause scrutiny allow the Supreme Court to pit local public concerns against private economic interests. . . . [T]his type of use of the Dormant Commerce Clause invites those with money and power to attack environmental regulations by bypassing the legislative process and going straight to the judiciary." (citations omitted)).

preference for government monopoly over privatization."[166] Instead of being left to the whim of the courts, state and local environmental regulations should be debated through the legislative process.[167]

Where there is congressional silence, Justice Thomas is right—states should be "free to set the balance between protectionism and the free market."[168] That balance weighs, on the one hand, state sovereignty over issues involving the environment, health, and safety and, on the other hand, strong economic national unity that encourages market entry.[169] The Dormant Commerce Clause fails to account for the necessary role states and localities play in this balancing process as it concerns environmental regulations.[170] A Dormant Commerce Clause that is too aggressively enforced could stymie "governments' ability to plan and provide for the most environmentally sound and economically acceptable solutions"[171]—solutions like Connecticut Public Act 13-285.

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[166] *United Haulers Ass'n, Inc.*, 550 U.S. at 354 (Thomas, J., concurring).

[167] *See id.* (Thomas, J., concurring) (arguing the dangers of "leav[ing] the future of state and local regulation of commerce to the whim of the Federal Judiciary").

[168] *Id.* at 352.

[169] *See* McCauliff, *supra* note 151, at 661 ("The Supreme Court's new concern with discrimination against interstate commerce by local protectionism emphasizes the role of the market by encouraging market entry, and consequently, de-emphasizes public interest, governmental functions and health and safety regulations." (citation omitted)).

[170] One example of how the Dormant Commerce Clause fails to account for the importance of states' roles as laboratories of experiment is with the contemporary goods movement, the long-range transportation of agricultural goods. Long-range transportation results in negative externalities, such as greenhouse gas emissions, that uniquely impact local communities. A policy that "provides explicit benefits exclusively to local producers [as a means to reduce the effect of greenhouse gas emissions] is particularly vulnerable to Dormant Commerce Clause challenge based on imputed protectionist intent." Moffa & Safdi, *supra* note 143, at 397. If the Ninth Circuit's decision in *Rocky Mountain Farmers Union v. Corey* is any indication, "local and global externalities . . . necessitate[] a fundamental rethinking of Dormant Commerce Clause jurisprudence." *Id.* at 351. In that case, the Ninth Circuit concluded that California's Low Carbon Fuel Standard, a program designed to address the negative externalities of the goods movement by assigning carbon intensity scores that treated in-state and out-of-state fuels differently based not on the fuel's origin but its carbon intensity, was not an extraterritorial regulation in violation of the Dormant Commerce Clause. *See* Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070, 1097 (9th Cir. 2013) ("California's regulatory experiment seeking to decrease GHG emissions and create a market that recognizes the harmful costs of products with a high carbon intensity does not facially discriminate against out-of-state ethanol."), *reh'g en banc denied*, 740 F.3d 507 (9th Cir. 2014), *cert denied*, 134 S.Ct. 2875 (2014). Such a rethinking is necessary because the "Dormant Commerce Clause evisceration of local and state regulations can add to the disempowerment of communities most affected by goods movement by further removing them from decision-making processes." Moffa & Safdi, *supra* note 143, at 404.

[171] Eric S. Petersen & David N. Abramowitz, *Municipal Solid Waste Flow Control in the Post*-Carbone *World*, 22 FORDHAM URB. L.J. 361, 416 (1995); *see also* Kalen, *supra* note 132, at 402, 425 (arguing that the Dormant Commerce Clause has "stymied state and local efforts to respond to emerging problems" as conservative organizations challenge state and local statutes designed to protect against climate change and that "it is reasonably likely," therefore, "that the [Dormant Commerce Clause] will function either as a potential obstacle or a chilling effect on laudable efforts"); Moffa & Safdi, *supra* note 143, at 406 ("[I]t is the authors' hope that Dormant Commerce Clause jurisprudence will eventually fall by the historical wayside. The principles of cooperative federalism and

C. *Public Act 13-285 May Run Afoul of the Dormant Commerce Clause*

Connecticut Public Act 13-285 likely would fail the first tier of the *Carbone* Court's Dormant Commerce Clause analysis, which considers whether a flow control ordinance is per se invalid because it discriminates against interstate commerce.[172] If Public Act 13-285 were to survive strict scrutiny analysis, however, it has a good chance of passing the *Pike* balancing test, the *Carbone* Court's second tier of analysis.[173] Connecticut could also amend its law to avoid any constitutional challenges.

1. *Strict Scrutiny Analysis*

When framed as a law that ensures that Connecticut's composting facilities have enough organic materials product to support them, Public Act 13-285 likely provides for the kind of local economic protectionism that is per se invalid.[174] This is because Connecticut's organic materials waste ban looks similar to the ordinance struck down in *Carbone* in that it requires certain local entities to bring a local resource to a state-mandated processing facility.[175] That the ordinance in *Carbone* favored only one local facility, whereas Public Act 13-285 applies to multiple facilities, does not matter because this fact in *Carbone* was not determinative; it just made the ordinance's protectionist effect all the more acute.[176] Moreover, under *Carbone*, as long as the law espouses protectionist intent to discriminate against interstate commerce, there does not necessarily need to be evidence supporting actual discriminatory effect on interstate commerce.[177]

Connecticut could make two arguments in its defense. First, Connecticut could claim that Public Act 13-285 "serves a legitimate local purpose that could not be served as well by nondiscriminatory means."[178] But "[t]his last-ditch opportunity is largely illusory" with one exception: *Maine v. Taylor*.[179] In *Taylor*, the Court upheld the State of Maine's ban on

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environmental justice both suggest that the time has come for the courts to abandon Dormant Commerce Clause review entirely.").

[172] *See* C & A Carbone, Inc. v. Town of Clarkstown, 511 U.S. 383, 390 (1994) (offering a two-tiered analysis for Dormant Commerce Clause cases).

[173] *See id.*

[174] *See id.* at 392 (discussing how discrimination against interstate commerce in a way that aims to protect local businesses is "per se invalid" in all cases except where a municipality can demonstrate that it has "no other means to advance a legitimate local interest").

[175] *See* CONN. GEN. STAT. § 22a-226e (2013).

[176] *See Carbone*, 511 U.S. at 392 (noting that the fact that the town's ordinance only favored one local processing facility only "makes the protectionist effect of the ordinance more acute").

[177] *See* Mank, *supra* note 142, at 178 ("The *Carbone* majority invalidated the flow control ordinance because it interfered with free access to waste markets, although there was no evidence of discrimination between in-state and out-of-state firms . . . .").

[178] United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 356 (2007) (Alito, J., dissenting).

[179] O'Grady, *supra* note 149, at 574 n.12.

the importation of baitfish, as Maine had no other means of preventing a spread of parasites and an adulteration of its native fish populations.[180] The Court held that Maine was not expected "to sit idly by and wait until potentially irreversible environmental damage has occurred or until the scientific community agrees on what disease organisms are or are not dangerous before it acts to avoid such consequences."[181]

Under *Taylor*, Connecticut would have to identify a specific threat to the state's health and safety or to the integrity of its natural resources.[182] If Connecticut were to identify, say, climate change as its threat, analogizing to *Taylor*'s tangible threats of parasites and adulteration would be difficult. The causal relationship between mandating food waste diversion and, thereby, reducing climate change is far more attenuated than banning the importation of baitfish and, thereby, eliminating the threat of parasites and adulteration on native fish populations. Furthermore, to address climate change, there are a number of alternative, nondiscriminatory means that Connecticut could implement, such as carbon offset programs or encouraging more people to bike or carpool to work.[183] Therefore, while Connecticut also should not have to sit idly by and wait until irreversible environmental damage has occurred because of the high amount of food waste in its MSW, Connecticut's law likely would not withstand strict scrutiny.

Second, Connecticut could distinguish Public Act 13-285 from *Carbone* by arguing that its law is not facially discriminatory because out-of-state composting facilities can receive Connecticut's organic materials since in-state waste generators can send their waste to "any *authorized* source-separated organic material composting facility."[184] This argument could save Public Act 13-285 from being per se invalid. The law's twenty-mile proximity trigger, however, may make this distinction irrelevant. Even if the law authorizes any in-state or out-of-state facility to receive the state's organic material, only Connecticut-based facilities can activate the twenty-mile proximity trigger. And this proximity trigger effectively discriminates against out-of-state facilities because

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[180] Maine v. Taylor, 477 U.S. 131, 141, 151 (1986).

[181] *Id.* at 148 (citation omitted).

[182] *See id.* at 151 ("As long as a State does not needlessly obstruct interstate trade or attempt to 'place itself in a position of economic isolation,' . . . it retains broad regulatory authority to protect the health and safety of its citizens and the integrity of its natural resources." (citation omitted)).

[183] An analysis of Connecticut's Public Act 13-285 under *Taylor* using the threat of hunger similarly fails given that there are a number of alternative ways to combat hunger other than through the state's organic materials waste ban.

[184] CONN. GEN. STAT. § 22a-226e(a)(1)(B) (2017) (emphasis added).

transportation costs of organic materials are cost prohibitive beyond a certain distance.[185]

2. Pike *Balancing Test*

If Public Act 13-285 were to survive strict scrutiny analysis, then, the question becomes whether it would pass a *Pike* balancing test. Under this test, Public Act 13-285 is constitutional if its incidental impact on interstate commerce is not "clearly excessive in relation to the putative local benefits."[186] Connecticut could persuasively argue that the law benefits its communities by (1) providing the organic materials necessary to sustain the state's anaerobic digestion facilities; (2) increasing organic materials recycling and, thereby, reducing food waste in the state's MSW; and (3) conferring significant health and environmental benefits to its citizens. As evidence does not exist that the law actually burdens interstate commerce, these local, putative benefits would tip the scale in favor of finding Public Act 13-285 constitutionally valid.

3. *Amending Public Act 13-285*

While no party has yet to challenge the constitutionality of Public Act 13-285,[187] Connecticut could amend its law so that it no longer discriminates against interstate commerce.

First, albeit an unlikely solution, Connecticut could make its permitted composting facilities public entities, which would subject them to the more lenient *Pike* balancing test under *United Haulers*.[188] Given "local government's vital role in waste management," public facilities would pass constitutional muster.[189]

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[185] *See* Part II.C.2 (explaining that Connecticut's requirement that disposal for waste generators meet a tonnage threshold *and* be located not more than twenty miles from an authorized facility creates a proximity trigger and impermissibly discriminates against interstate commerce).

[186] C & A Carbone, Inc. v. Town of Clarkstown, 511 U.S. 383, 390 (1994).

[187] Challenging recycling laws might be a bad business move; whereas, studies support that using green initiatives as a marketing tool is good for business. *See, e.g.*, Dholakiya Pratik, *Earth Day Aspirations: Saving Money While Saving the Environment*, BUSINESS.COM (Feb. 22, 2017), https://www.business.com/articles/earth-day-aspirations-saving-money-while-saving-the-environment/ [https://perma.cc/4KU6-A8S6] ("A Nielson study of consumer attitudes across 60 countries found that 55% of consumers worldwide would pay a premium for products offered by eco-friendly and socially responsible companies. These consumer claims are also backed up by research of actual sales figures."); *see also Bill 1116, An Act Concerning the Recycling of Organic Materials by Certain Food Wholesalers, Manufacturers, Supermarkets, & Conference Ctr.*, 2011 Leg. Sess. May 19, 2011 (statement of Sen. J. Edward Meyer III) (explaining that "there was no business opposition in the public hearing to this bill [what would become Public Act 11-217, the precursor to Public Act 13-285], but the bill on its face obviously has some costs to those large generators of organic materials, because they will be having to bring the—organic materials to the composting facility").

[188] *See supra* Part III.A (discussing the *Pike* balancing test in *United Haulers*).

[189] United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 344 (2007).

Second, Connecticut could remove the authorization requirement under the act, thereby, allowing any eligible composting facility in-state or out-of-state to participate in its market. The downside here is that Connecticut's nascent anaerobic digestion facilities may suffer and Connecticut needs these facilities to meet its 60 percent diversion goal.[190] Additionally, the authorization requirement serves an important oversight function of ensuring that the facilities receiving Connecticut's organic materials are efficient and capable. Under this solution, the proximity trigger may still prove problematic for the reasons discussed above.

Finally, Connecticut could remove the proximity trigger altogether. The problem, though, with this solution is whether, without the proximity trigger, the law still would achieve its desired goals of removing food waste from Connecticut's MSW while also supporting the state's anaerobic digestion market by ensuring that the state's anaerobic digestion facilities receive enough product to be financially viable.

CONCLUSION

Food waste contributes to global warming by depleting the nation's natural resources and by producing toxic methane gas. In this way, food waste is undeniably a national problem, but it is also a state and local problem in need of immediate solutions. Connecticut Public Act 13-285 offers an environmentally sound, innovative solution to Connecticut's food waste problem. It is not a solution that will eliminate Connecticut's food waste—as the state should implement a more comprehensive organic waste ban that reaches individual consumers as well as industrial generators—but it is a start.

Connecticut's organic waste ban should be heralded as innovative and necessary; it reduces food waste and harmful methane gas emissions, promotes Connecticut's anaerobic digestion industry, and creates green energy and new job opportunities. Instead, it may be vulnerable to challenge under the Dormant Commerce Clause, which has the power to impede critical state and local regulations aimed at environmental protection—regulations like Connecticut Public Act 13-285. But a rigid application of the Dormant Commerce Clause that does not show deference to state experimentation on the issue of food waste reduction fails to account for the important role states and localities play as "innovators and guardians of public health and the environment."[191]

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[190] THE PLAN, *supra* note 83, at 7, 19.

[191] Moffa & Safdi, *supra* note 143, at 401.